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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/129,238	08/05/1998	VERONIQUE SARDOY	4101-0206-55	4217

22850 7590 01/29/2002

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EXAMINER

YEE, DEBORAH

ART UNIT	PAPER NUMBER
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1742

23

DATE MAILED: 01/29/2002

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Paper No. 23

Application Number: 09/129,238  
Filing Date: August 05, 1998  
Appellant(s): SARDOY ET AL.

Norman F. Oblon  
For Appellant

MAILED  
JAN 28 2002  
GROUP 1700

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 3, 2001.

**(1) Real Party in Interest**

A statement identifying the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) Status of Claims**

The statement of the status of the claims contained in the brief is correct.

**(4) Status of Amendments After Final**

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The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Invention**

The summary of invention contained in the brief is correct.

**(6) Issues**

The appellant's statement of the issues in the brief is correct.

**(7) Grouping of Claims**

Appellant's brief includes a statement that claims 8-17, 19 and 21 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) Claims Appealed**

Copies of Appealed claims are in the Appendix I.

**(9) Prior Art of Record**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**556834A2**

**FUJINAGA et al.**

**8-1993**

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 8-17, 19 and 21 stand rejected under 35 U.S.C. 103. This rejection is set forth in prior Office Action, Paper No. 20.

**(11) Response to Argument**

Applicant's arguments filed 12-13-01 have been fully considered but they are not persuasive.

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In argument 1, Appellant submitted that the specific steel having specific constituents in specific amount ranges in conjunction with a specific coiling temperature range of greater than 530 to 570C, further in conjunction with the annealing temperature range of 650 to 670C distinguishes over what is shown in the European patent (hereinafter EP'834).

It is the Examiner's position that in regard to the annealing temperature, appellant's specification on lines 21 to 25 of page 11 discloses "The continuous annealing carried out at a temperature which is generally 20 to 30C above the recrystallization temperature of the steel; in the case of the process according to the invention, the annealing temperature is at most equal to 700C...". Similarly, EP'834 on line 20 on page 8 discloses "The annealing temperature may be the recrystallization temperature or above." Hence the annealing temperature ranges of appellant's claims and prior art overlap and a prima facie case of obviousness is established.

Appellant argued that EP'834 broad annealing temperature would not necessarily indicate that the annealing temperature would be within the claimed range of 640 to 670C, since the recrystallization temperature for different steels is different and the upper limit of 700C would indicate that the annealing temperature as spoken of in the specification may actually occur above 670 to 700C, outside the range of the present claims. It is the examiner's position that EP'834 discloses in claim 1 on page 20 a steel alloy with constituents whose wt% ranges encompassed those recited by the claims. Hence EP'834 steels would suggest the appellant's steels and would inherently have recrystallization temperatures within 670 to 700C taught by appellant.

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Moreover, it should be noted that appellant's claimed annealing temperature of 640 to 670C fails to define patentable novelty over the EP'834 because there is nothing to show (e.g by comparative test data) that it is critical and productive of new and unexpected results. Appellant's specification on lines 21 to 25 on page 11 and his original claims indicate that an upper limit of 700C is permissible, and nowhere is there a suggestion that an upper limit of 670C is somehow critical. Comparative test data in Table 3 on page 13 of appellant's specification is insufficient to establish criticality for the upper limit annealing temperature of 670C because the comparative examples contain greater than 0.01% Al which is outside the present invention. Hence with two different variables, it is uncertain whether inferior properties are attributed to an annealing temperature greater than 670C or because of the high Al content.

It was argued that specific examples on pages 9 and 10 of EP'834 fail to meet one or more the recited limitations of appellant's claims. It is the examiner's position that the closest prior art example would be sample no. 3 which discloses an annealing temperature of 670 which is within appellant's claimed range of 640 to 670C but coils at 520C which is slightly lower than appellant's range of 530 to 570C. It is the examiner's position that since appellant has not demonstrated criticality of the lower limit of the coiling temperature range, then a process using 530C vs. 520C would depict a mere difference in the proportion of temperature without any attendant unexpected results which would not patentably distinguish the claims over EP'834. Appellant pointed out steel J in Table 4 on page 18 of his specification as a comparative example which meets the claimed compositional limitations and annealing temperature range but coils

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at 670C which is outside appellant's claimed coiling temperature range of 530 to 570C, and therefore have inferior properties. Steel J would be an invalid comparative example to patentably distinguish over EP'834 since criticality of the lower limit for the coiling temperature has not been demonstrated. Moreover, note that appellant's original claims, and lines 2 to 4 on page 10 of his specification discloses coiling temperature below 620 is permissible. Hence there is nothing to show that a lower limit of 530 is somehow critical.

Appellant submitted that the claims 14 and 21 recite a steel sheet containing at most 0.01% Al and at most 0.001% Ti and Nb, each. It should be noted that claim 1 on page 12 of EP'834 also discloses Al at 0.005% or less and excludes Ti and Nb.

Appellant refers to Figures 2A through 2E to establish that the steels of the instant claims produce a grain structure which is more homogeneous and of an equiaxed structure than steels outside the parameters of the steel. The outside parameters, however, are steels containing 0.24% Al or more. Same applies with appellant's Figures 5A to 5C and Figure 6 and Table 4 wherein the outside parameters are Al and/or C. This test data, however, would not distinguish over EP'834 because the prior art alloy contains about 0.005% or less Al. Note Table 2 on page 9 of EP'834 discloses examples 1 to 11 which meet the claimed composition except contain slightly higher amounts of Mn or N. Note for example, sample no. 5 which meets the claimed composition except contains 0.006% N which is slightly higher than appellant's N range of less than 0.006. Since criticality of the N range has not been demonstrated (e.g. by

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comparative test data), then the slight difference in N would depict a mere difference in the proportion of element without any attendant unexpected results.

In argument 2, appellant submitted that claim 9 sets forth an annealing period of less than three minutes, a range which is not specifically shown in EP'834. Contrary to appellant's statement, EP'834 discloses specific examples in Tables 3 and 4 on pages 10 and 11, which perform annealing at 10 and 20 seconds (within appellant's range of less than 3 minutes)

In arguments 3 and 4, appellant stated that the claimed parameters of reduction ratio for hot or cold working, steel sheet thickness, and annealing time recited in claims 10 and 11 are not taught by prior art. Also it was submitted that the reasons for the particular limitations in claims 10 and 11 are discussed on page 11, lines 34 through page 12, line 20 and refer to different processes for producing cans, such as drawing-redrawing (DRD). It is the Examiner's position that, EP'834 on lines 5 to 28 on page 3 discloses using steel sheet to produce cans by various techniques such as DRD, similar to appellant. Also it should be noted that EP'834 in Table 3 on page 10 discloses annealing times ranging from 10 to 20 seconds which is within the 20 seconds recited in claim 10, and is slightly less than the 30 seconds recited in claim 11. Also EP'834 in claim 3 recites temper rolling at a reduction of about 50% or less which is well within the range of 23 to 31% recited in claim 10 and 2.5 to 17% recited in claim 11. Also EP'834 recites specific examples in Table 3 on page 10 ranging from 2 to 20% within the 2.5 to 17% recited in claim 11. Even though EP'834 does not teach the reduction ratios for hot or cold working as recited by the claims 10 and 11, such would not be a patentable

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difference since it would be a matter of routine optimization depending on the desired properties which is well within the skill of artisan and productive of no new and unexpected results.

It was submitted in arguments 5 to 9, that EP'834 does not disclose a steel that is killed by contact with the slag having an adjusted amount of Al and alumina as recited in claims 12 to 17. It is the examiner's position that EP'834, lines 36-51 on page 6 discloses an Al-killed steel wherein Al is incorporated in the steel melt to deoxidize. Although using a slag having an adjusted amount of Al and alumina is not specifically disclosed, it would be implicit because it is well known in the metallurgical art as a conventional and commonly practiced technique to kill and deoxidize steel.

In regard to argument 10, it was submitted that claim 19 sets forth a specific range for nitrogen which is not shown in EP'834. It is the Examiner's position that EP'834 in claim 1 recites 0.001 to 0.04% N which is within appellant's N range of 0.0022 to 0.005%. Hence claim 19 would not patentably distinguish over EP'834.

In argument 11, appellant stated that the plane anisotropy coefficient of 0.08-0.12 recited in claim 21 is not disclosed by EP'834. It is the Examiner's position that the plane anisotropy coefficient would be inherent since the compositional and process limitations are closely met, and in absence of proof to the contrary.

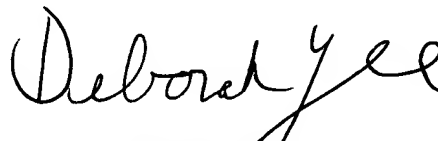
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 703-308-1102. The examiner can normally be reached on Monday-Friday from 6:30 to 4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 703-308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-873-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

dy  
January 24, 2002

  
**DEBORAH YEE**  
**PRIMARY EXAMINER**

  
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